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RAW SEQUENCE LISTING                      DATE: 12/11/2000  
 PATENT APPLICATION: US/09/724,860        TIME: 13:23:11

Input Set : A:\99372Aseq.txt  
 Output Set: N:\CRF3\12112000\I724860.raw

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3 <110> APPLICANT: Welcher, Andrew
4   Wen, Duanzhi
5   Kelly, Michael
7 <120> TITLE OF INVENTION: Interferon-Like Molecules and Uses Thereof
9 <130> FILE REFERENCE: 99,372-A
C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/724,860
C--> 12 <141> CURRENT FILING DATE: 2000-11-28
14 <150> PRIOR APPLICATION NUMBER: 60/169,720
15 <151> PRIOR FILING DATE: 1999-12-08
17 <160> NUMBER OF SEQ ID NOS: 39
19 <170> SOFTWARE: PatentIn Ver. 2.0
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23 <212> TYPE: DNA
24 <213> ORGANISM: Rattus norvegicus
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27 <221> NAME/KEY: CDS
28 <222> LOCATION: (53)..(625)
30 <220> FEATURE:
31 <221> NAME/KEY: sig_peptide
32 <222> LOCATION: (53)..(115)
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36                                     Met Thr
37                                     1
39 ctg aag tat tta tgg ctg gtg gcc ctc gtg gct cta tac att tca ccc 106
40 Leu Lys Tyr Leu Trp Leu Val Ala Leu Val Ala Leu Tyr Ile Ser Pro
41       5              10              15
43 atc cag tct cag aac tgt gtg tat ctg gat cat acc atc ttg gaa aac 154
44 Ile Gln Ser Gln Asn Cys Val Tyr Leu Asp His Thr Ile Leu Glu Asn
45   20              25              30
47 atg aaa ctt ctg agc agc atc agg acc acc ttt ccc tta aga tgt cta 202
48 Met Lys Leu Leu Ser Ser Ile Arg Thr Thr Phe Pro Leu Arg Cys Leu
49 35              40              45              50
51 aaa gat atc acg gat ttt gag ttt cct caa gag att ctg ctg tac gtc 250
52 Lys Asp Ile Thr Asp Phe Glu Phe Pro Gln Glu Ile Leu Leu Tyr Val
53       55              60              65
55 cag cat gtg aaa aag gac ata aag gca gtc acc tat cat ata tct tct 298
56 Gln His Val Lys Lys Asp Ile Lys Ala Val Thr Tyr His Ile Ser Ser
57   70              75              80
59 ctg gcg cta att att ttc agt ctt aaa gac tcc atc tcc ctg gcg aca 346
60 Leu Ala Leu Ile Ile Phe Ser Leu Lys Asp Ser Ile Ser Leu Ala Thr
61   85              90              95
63 gag gaa cgc ttg gaa cgt atc aga tcg gga ctt ttc aaa caa gtg cag 394
64 Glu Glu Arg Leu Glu Arg Ile Arg Ser Gly Leu Phe Lys Gln Val Gln
65 100              105              110
67 caa gct cga gag tgc atg gta gac gag gag aac aag aac acg gag gag 442

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68 Gln Ala Arg Glu Cys Met Val Asp Glu Glu Asn Lys Asn Thr Glu Glu
69 115          120          125          130
71 gac agt aca tca caa cat cct cac tca gag ggc ttc aag gca gtc tac 490
72 Asp Ser Thr Ser Gln His Pro His Ser Glu Gly Phe Lys Ala Val Tyr
73          135          140          145
75 ctg gaa ttg aac aag tat ttc ttc aga atc aga aag ttc ctg gta aat 538
76 Leu Glu Leu Asn Lys Tyr Phe Phe Arg Ile Arg Lys Phe Leu Val Asn
77          150          155          160
79 aag aaa tac agt ttc tgt gcc tgg aag att gtc gtg gtg gaa ata aga 586
80 Lys Lys Tyr Ser Phe Cys Ala Trp Lys Ile Val Val Val Glu Ile Arg
81          165          170          175
83 aga tgt ttc agt ata ttt tac aaa cta ctc aac atg aat tgagaatcat 635
84 Arg Cys Phe Ser Ile Phe Tyr Lys Leu Leu Asn Met Asn
85          180          185          190
87 ccagcttcaa gcaagaactt agatagaagt tgtgactyct caaatgtccc caagaacgct 695
89 tgattctaag gctattgcga gtctgctgct acacacttcg gacgcaagac ttttcaaggt 755
91 cagggttcaa ggtagtacag tcaaaggaag tcttatgtta agcaaaagaa aaatttcagt 815
93 gaaaaagcta gcagaaatgt caacttgcca aaaaaacaac ttatggatta tggcattgac 875
95 gttactagca aaaaaaatua aacaaaaaaa aacaaaaaa 913
98 <210> SEQ ID NO: 2
99 <211> LENGTH: 191
100 <212> TYPE: PRT
101 <213> ORGANISM: Rattus norvegicus
103 <400> SEQUENCE: 2
104 Met Thr Leu Lys Tyr Leu Trp Leu Val Ala Leu Val Ala Leu Tyr Ile
105 1          5          10          15
107 Ser Pro Ile Gln Ser Gln Asn Cys Val Tyr Leu Asp His Thr Ile Leu
108          20          25          30
110 Glu Asn Met Lys Leu Leu Ser Ser Ile Arg Thr Thr Phe Pro Leu Arg
111          35          40          45
113 Cys Leu Lys Asp Ile Thr Asp Phe Glu Phe Pro Gln Glu Ile Leu Leu
114          50          55          60
116 Tyr Val Gln His Val Lys Lys Asp Ile Lys Ala Val Thr Tyr His Ile
117 65          70          75          80
119 Ser Ser Leu Ala Leu Ile Ile Phe Ser Leu Lys Asp Ser Ile Ser Leu
120          85          90          95
122 Ala Thr Glu Glu Arg Leu Glu Arg Ile Arg Ser Gly Leu Phe Lys Gln
123          100          105          110
125 Val Gln Gln Ala Arg Glu Cys Met Val Asp Glu Glu Asn Lys Asn Thr
126          115          120          125
128 Glu Glu Asp Ser Thr Ser Gln His Pro His Ser Glu Gly Phe Lys Ala
129          130          135          140
131 Val Tyr Leu Glu Leu Asn Lys Tyr Phe Phe Arg Ile Arg Lys Phe Leu
132 145          150          155          160
134 Val Asn Lys Lys Tyr Ser Phe Cys Ala Trp Lys Ile Val Val Val Glu
135          165          170          175
137 Ile Arg Arg Cys Phe Ser Ile Phe Tyr Lys Leu Leu Asn Met Asn
138          180          185          190
141 <210> SEQ ID NO: 3

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RAW SEQUENCE LISTING                      DATE: 12/11/2000  
 PATENT APPLICATION: US/09/724,860        TIME: 13:23:11

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142 <211> LENGTH: 168
143 <212> TYPE: PRT
144 <213> ORGANISM: Rattus norvegicus
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148   1           5           10           15
150 Ser Ile Arg Thr Thr Phe Pro Leu Arg Cys Leu Lys Asp Ile Thr Asp
151           20           25           30
153 Phe Glu Phe Pro Gln Glu Ile Leu Leu Tyr Val Gln His Val Lys Lys
154           35           40           45
156 Asp Ile Lys Ala Val Thr Tyr His Ile Ser Ser Leu Ala Leu Ile Ile
157           50           55           60
159 Phe Ser Leu Lys Asp Ser Ile Ser Leu Ala Thr Glu Glu Arg Leu Glu
160 65           70           75           80
162 Arg Ile Arg Ser Gly Leu Phe Lys Gln Val Gln Gln Ala Arg Glu Cys
163           85           90           95
165 Met Val Asp Glu Glu Asn Lys Asn Thr Glu Glu Asp Ser Thr Ser Gln
166           100          105          110
168 His Pro His Ser Glu Gly Phe Lys Ala Val Tyr Leu Glu Leu Asn Lys
169           115          120          125
171 Tyr Phe Phe Arg Ile Arg Lys Phe Leu Val Asn Lys Lys Tyr Ser Phe
172           130          135          140
174 Cys Ala Trp Lys Ile Val Val Val Glu Ile Arg Arg Cys Phe Ser Ile
175 145           150          155          160
177 Phe Tyr Lys Leu Leu Asn Met Asn
178           165
181 <210> SEQ ID NO: 4
182 <211> LENGTH: 1836
183 <212> TYPE: DNA
184 <213> ORGANISM: Homo sapiens
186 <220> FEATURE:
187 <221> NAME/KEY: CDS
188 <222> LOCATION: (575)..(1195)
190 <220> FEATURE:
191 <221> NAME/KEY: sig_peptide
192 <222> LOCATION: (575)..(655)
194 <400> SEQUENCE: 4
195 aagcttaatt taacaaaatt ggaaaaacct aaactatact gtgctctggt gacctagcaa 60
197 tcaaaataatc acagtcatttt ggtcaaatgtc tatgattaac tcaatgagac aggatgtttg 120
199 gctatagcac cagggtacaaa aaatatatatt tcatgaagga tcaactccctc ttatgtaata 180
201 gatttgggtg agtgagtgag tgagtgagtg catggactca cagcttttgg ctttctgaaa 240
203 taccctgcat cagtcttgtt atgatgatcc cttagtgtctg ggatggatca tccaggcatt 300
205 taaggtaaca cgatggtaat tctttgctca tttttcaggg aaaaaaaaaa gttatcactt 360
207 ccaagtcyg catagtcacc cgaagtaaaa aaaaaaaaaa aaaaaaaaaa cctcagaggc 420
209 aaaggaaagg ggccgcaacc ttggtlaact gtgaaatgac gaatgagaaa actcctcctg 480
211 ctgaagatat tcaggtatat aaaggcacat gaaggaaaac tcaaaacatc attgtcatat 540
213 acacatcttc tggatttttt agcttgcaaa aaaa atg agc acc aaa cct gat atg 595
214                                     Met Ser Thr Lys Pro Asp Met
215                                     1               5

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RAW SEQUENCE LISTING                      DATE: 12/11/2000  
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217 att caa aag tgt ttg tgg ctt gag atc ctt atg ggt ata ttc att gct 643
218 ile Gln Lys Cys Leu Trp Leu Glu ile Leu Met Gly ile Phe ile Ala
219      10      15      20
221 ggc acc cta tcc ctg gac tgt aac tta ctg aac gtt cac ctg aga aga 691
222 Gly Thr Leu Ser Leu Asp Cys Asn Leu Leu Asn Val His Leu Arg Arg
223      25      30      35
225 gtc acc tgg caa aat ctg aga cat ctg agt agt atg agc aat tca ttt 739
226 Val Thr Trp Gln Asn Leu Arg His Leu Ser Ser Met Ser Asn Ser Phe
227 40      45      50      55
229 cct gta gaa tgt cta cga gaa aac ata gct ttt gag ttg ccc caa gag 787
230 Pro Val Glu Cys Leu Arg Glu Asn ile Ala Phe Glu Leu Pro Gln Glu
231      60      65      70
233 ttt ctg caa tac acc caa cct atg aag agg gac atc aag aag gcc ttc 835
234 Phe Leu Gln Tyr Thr Gln Pro Met Lys Arg Asp ile Lys Lys Ala Phe
235      75      80      85
237 tat gaa atg tcc cta cag gcc ttc aac atc ttc agc caa cac acc ttc 883
238 Tyr Glu Met Ser Leu Gln Ala Phe Asn ile Phe Ser Gln His Thr Phe
239      90      95      100
241 aaa tat tgg aaa gag aga cac ctc aaa caa atc caa ata gga ctt gat 931
242 Lys Tyr Trp Lys Glu Arg His Leu Lys Gln ile Gln ile Gly Leu Asp
243 105      110      115
245 cag caa gca gag tac ctg aac caa tgc ttg gag gaa gac gag aat gaa 979
246 Gln Gln Ala Glu Tyr Leu Asn Gln Cys Leu Glu Glu Asp Glu Asn Glu
247 120      125      130      135
249 aat gaa gac atg aaa gaa atg aaa gag aat gaq atg aaa ccc tca gaa 1027
250 Asn Glu Asp Met Lys Glu Met Lys Glu Asn Glu Met Lys Pro Ser Glu
251      140      145      150
253 gcc agg gtc ccc cag ctg agc agc ctg gaa ctg agg aga tat ttc cac 1075
254 Ala Arg Val Pro Gln Leu Ser Ser Leu Glu Leu Arg Arg Tyr Phe His
255      155      160      165
257 agg ata gac aat ttc ctg aaa gaa aag aaa tac agt gac tgt gcc tgg 1123
258 Arg ile Asp Asn Phe Leu Lys Glu Lys Lys Tyr Ser Asp Cys Ala Trp
259      170      175      180
261 gag att gtc cga gtg gaa atc aga aga tgt ttg tat tac ttt tac aaa 1171
262 Glu ile Val Arg Val Glu ile Arg Arg Cys Leu Tyr Tyr Phe Tyr Lys
263      185      190      195
265 ttt aca gct cta ttc agg agg aaa taagggtatat ttttggaatt aaaattcctt 1225
266 Phe Thr Ala Leu Phe Arg Arg Lys
267 200      205
269 ttcctccga aatctcttcc tcttctcct cctccatctt ctttttaagg attgttgtgc 1285
271 tgtcctgtaa gcctgtcctc agttggactg gtagcctcgg aacatcaggg acactcacct 1345
273 ctctaaggag aggtaatgcc aaccatcctc aggggtgacca agagtctcct tagaaagtct 1405
275 ttaagacatt tttaaaggaa taagattccc tctccgtctt cttctattct ctcttgctct 1465
277 tttctgtggc catcttgaaa gagcttlgct atatatacca cctgtggact tcaccaagac 1525
279 aatggctaga ggatagggag cagagaatgt tgcaaatgg taacatttca atgacttaac 1585
281 tgttttgctg ccaaggttgc ttatcctatg aaaattcagc acattaaaag agcttatata 1645
283 tgctccctag agtcaatact cttgcatttt cccctcctg ctggggggga aaaaggttga 1705
285 catttctggc ccatttctt ctcagcttgg ttgtttgaa ttgatgcttg tggaatggta 1765
287 tttcattact ttaagaytga agatccatag tgaaattgga tggatggttg aattagacga 1825

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RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/724,860

DATE: 12/11/2000  
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Input Set : A:\99372Aseq.txt  
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1836

289 ccattaagct t  
 292 <210> SEQ ID NO: 5  
 293 <211> LENGTH: 207  
 294 <212> TYPE: PRT  
 295 <213> ORGANISM: Homo sapiens  
 297 <400> SEQUENCE: 5  
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 299 1 5 10 15  
 301 Leu Met Gly Ile Phe Ile Ala Gly Thr Leu Ser Leu Asp Cys Asn Leu  
 302 20 25 30  
 304 Leu Asn Val His Leu Arg Arg Val Thr Trp Gln Asn Leu Arg His Leu  
 305 35 40 45  
 307 Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys Leu Arg Glu Asn Ile  
 308 50 55 60  
 310 Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr Thr Gln Pro Met Lys  
 311 65 70 75 80  
 313 Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn  
 314 85 90 95  
 316 Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys Glu Arg His Leu Lys  
 317 100 105 110  
 319 Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys  
 320 115 120 125  
 322 Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met Lys Glu Met Lys Glu  
 323 130 135 140  
 325 Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro Gln Leu Ser Ser Leu  
 326 145 150 155 160  
 328 Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn Phe Leu Lys Glu Lys  
 329 165 170 175  
 331 Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg Val Glu Ile Arg Arg  
 332 180 185 190  
 334 Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu Phe Arg Arg Lys  
 335 195 200 205  
 338 <210> SEQ ID NO: 6  
 339 <211> LENGTH: 178  
 340 <212> TYPE: PRT  
 341 <213> ORGANISM: Homo sapiens  
 343 <400> SEQUENCE: 6  
 344 Cys Asn Leu Leu Asn Val His Leu Arg Arg Val Thr Trp Gln Asn Leu  
 345 1 5 10 15  
 347 Arg His Leu Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys Leu Arg  
 348 20 25 30  
 350 Glu Asn Ile Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr Thr Gln  
 351 35 40 45  
 353 Pro Met Lys Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser Leu Gln  
 354 50 55 60  
 356 Ala Phe Asn Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys Glu Arg  
 357 65 70 75 80  
 359 His Leu Lys Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu Tyr Leu  
 360 85 90 95

VERIFICATION SUMMARY                      DATE: 12/11/2000  
PATENT APPLICATION:    US/09/724,860       TIME: 13:23:13

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Output Set: N:\CRF3\12112000\I724860.raw

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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date